2. HOW DO I MANAGE MY PCB EQUIPMENT?

The electric transmission equipment your cooperative owns and maintains may contain polychlorinated biphenyls (PCBs). PCBs belong to a broad family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were manufactured approximately from 1932 to 1978.

RESOURCES

This chapter contains some technical language which may be unfamiliar to your. To familiarize you with the terms used, a list of definitions is included in Section 2.7.

Chemical properties of PCBs

PCBs can vary in toxicity, and can range in consistency from thin light-colored liquids to yellow or black waxy solids. Due to chemical properties of PCBs, such as low flammability, high chemical stability, high boiling point, and low electrical conductivity, they have been widely used in electrical equipment such as transformers and capacitors, and in hydraulic and heat transfer systems.

Most likely you know that PCBs and PCB-containing equipment are strictly regulated by EPA and your state. As the owner of this equipment it is your responsibility to manage your PCBs and PCB-equipment as specified in the regulations. This chapter provides a summary of the Federal PCB management requirements. It is organized to answer a number of questions about PCBs and their management, including:

- How and why are PCBs regulated?
- Do the PCB regulations apply to me, and if so, how do I comply with them?
- How do I manage my PCB equipment?

Not all PCB regulations are covered

The aim of this chapter is to give you a basic understanding of how the PCB regulations apply to your cooperative. However, it is not a complete description of all regulations that may apply to you because it does not present other Federal requirements, such as Superfund PCB requirements, which may apply to your cooperative if there have been PCB releases to the environment

USEFUL TIP

Under the Superfund law, PCBs can become regulated substances if they are detectable in the environment at any level. This is an issue for cooperatives with respect to PCB disposal methods (see Section 2.4.8) and leaks and spills (see Section 2.4.9).

from your cooperative (see box). This chapter also does not include any State requirements, which may be more strict than the federal requirements. To become familiar with your State's requirements consult your State environmental protection/natural resources agency.

2.1 HOW ARE PCBs REGULATED?

In 1976 Congress passed the Toxic Substances Control Act (TSCA) which effectively banned further manufacture, processing, distribution in commerce and use of PCBs, except in a totally enclosed manner. TSCA allows EPA to authorize certain uses of PCBs. Congress assigned EPA the task of enforcing TSCA. EPA developed a series of regulations which govern the use, marking, storage, recordkeeping, and disposal of PCBs. These regulations are published in the Code of Federal Regulations (40 CFR Part 761).

RESOURCES

For additional detail on the PCB regulations presented in this chapter, you can consult the PCB rules themselves. To get a copy of these rules, you may call the EPA TSCA Hotline at (202) 554-1404 or Dick Sternberg at NRECA at (703) 907-5824. You can also get a copy of a PCB Q & A Manual by calling the hotline.

PCB rules are being amended

EPA is in the process of amending the PCB rules, and the amendments may be final by the end of July 1998. The amendments establish prohibitions and requirements for the manufacture, processing, and distribution of PCBs and PCB items. Copies of the amended rules will be available from the TSCA hotline (see box above).

2.2 WHY WERE PCBs REGULATED?

PCBs are toxins

Action was taken to regulate PCBs because they were found to present an unreasonable risk to human health and the environment. PCBs can be ingested, inhaled or absorbed through the skin. Once in the body, they are suspected of causing cancer, and liver, reproductive, and developmental defects. High concentrations of PCBs also are known to cause a painful and disfiguring skin condition called chloracne.

PCBs are worldwide pollutants

Since PCBs are one of the most stable compounds known, they are also one of the most widespread pollutants. If released into the environment, PCBs sometimes enter the food chain and tend to accumulate in the fatty tissues of organisms. PCBs have been found all over the world in many species of fish, birds, and other animals including humans. Fish that live and feed in PCB contaminated waters, have PCB levels many times

higher than the PCB level of the water. Birds that feed off these fish have an even higher concentration of PCBs in their tissues than the fish. In this way, the levels of PCBs can increase up the food chain, potentially exposing humans to very high levels of the toxic PCBs.

In addition, if PCBs burn, harmful chemicals such as dioxins and dibenzofurans can be created and released into the environment. These chemicals are believed to be even more toxic than PCBs themselves and have been found to cause cancer, as well as reproductive and developmental defects.

2.3 DO THE PCB REGULATIONS APPLY TO ME?

USEFUL TIP

Some states have set the regulatory limit lower than 50 ppm; check with your State.

The PCB regulations address three areas related to PCBs: electrical equipment contining PCBs in their dielectric fluid, liquids containing PCBs, and spills of PCB liquids. The PCB concentration in a piece of equipment's dielectric fluid or in stored fluid (used for servicing) determines which regulations will apply. If your cooperative owns any electrical equipment that contains PCBs in the dielectric fluid at concentrations of 50 parts per million (ppm) or greater, or if your cooperative owns, uses, or disposes of liquids containing PCBs at concentrations greater than 50 ppm, the regulations apply to you. Also, if your cooperative has had spills of liquids containing any amount of PCBs, the regulations will apply to you.

50 ppm PCBs is regulatory limit

The following sections explain the regulatory classifications of electrical equipment containing PCBs, and of liquids containing PCBs. Section 2.4 explains the various regulations for your equipment and stored fluid. Section 2.5 explains regulations applied to spills of liquids containing PCBs.

2.3.1 Electrical Equipment Containing PCBs

The regulations classify electrical equipment containing PCBs in the dielectric fluid as follows:

Classifications of PCB equipment

- ***PCB***—Electrical equipment that contains dielectric fluid with a PCB concentration of 500 ppm or greater. For example, a transformer that contains 500 or more ppm PCBs in the dielectric fluid is a "PCB transformer".
- ***PCB-contaminated***—Electrical equipment that contains dielectric fluid with a PCB concentration of 50 ppm but less than 500 ppm. For example, a transformer that contains between 50

and 499 ppm PCBs in the dielectric fluid is a "PCB-contaminated" transformer.

- ***Non-PCB***—Electrical equipment that contains dielectric fluid with a PCB concentration less than 50 ppm. For example, a transformer that contains less than 50 ppm PCBs in the dielectric fluid is a "non-PCB" transformer, and falls outside the regulations for electrical equipment.

Please note that you cannot change the PCB concentration of a piece of equipment such as a transformer unless you follow the reclassification requirements in the rules (see box). These are presented in Section 2.4.6.

USEFUL TIP

You cannot change the PCB concentration in oil by diluting it with oil of a lower PCB concentration or oil without PCBs. The entire mixture would have to be regarded as having the higher concentration of PCBs.

2.3.2 Liquids Containing PCBs

Classifications of PCB liquids

The regulations classify liquids containing PCBs (e.g., liquids that are not in use in electrical equipment) in the following way:

- ***PCB***—Liquid that contains 50 ppm or greater is considered to be PCB.
- ***Non-PCB***—Liquid that contains less than 50 ppm is considered non-PCB. Please note that if non-PCB liquid is spilled, it is still subject to TSCA spill requirements (See Section 2.3.3).
- ***Non-Detectable***—Liquid with a concentration of less than 2 ppm of PCB is non-detectable.

Please note that under the regulations there is no *PCB-contaminated* category for oil. The PCB-contaminated category only applies to electrical equipment.

2.3.3 Spill Material

Spills of liquids containing ***any amount*** of PCBs are subject to TSCA regulations. If the spill reaches the environment, then Superfund regulations apply as well, and your cooperative may be liable for environmental damage. (For details on spill clean up requirements for PCB liquids, see Section 2.5 and Chapter 7.)

2.4 HOW DO I MANAGE EQUIPMENT AND STORED FLUIDS CONTAINING PCBS?

This section provides information on how to service, label, inspect, reclassify, store, and dispose of equipment containing more than 50 ppm of PCBs in the dielectric fluid, and how to store, label, and inspect fluids containing more than 50 ppm PCBs used for servicing or reclassifying these types of equipment. The types of equipment discussed in this section include transformers and their bushings, capacitors, reclosers, regulators, electric light ballasts, and oil switches. Since the regulations for managing equipment and stored fluid containing PCBs vary depending on the concentration of PCBs in the dielectric fluid, it is important to determine this concentration.

2.4.1 How Do I Tell Whether My Equipment Contains PCBs and the PCB Concentration?

The first step in determining whether your equipment contains PCBs (and the concentration of PCBs in the dielectric fluid) is to look at the metal nameplate permanently affixed to the unit by the manufacturer (i.e., not removable stickers put on equipment by your cooperative).

How manufacturers label equipment

Manufacturers have been prohibited from using PCBs when they manufacture electrical equipment since 1979. So any item of electrical equipment manufactured since then should not contain PCBs, so long as it has not been serviced with PCB containing oil. Also, since the mid 1980s, manufacturers have been required to put information on nameplates or otherwise permanently label equipment to indicate the item does not contain PCBs. Labels or nameplates on capacitors and transformers may say "does not contain PCBs," "No PCBs," "PCB free," "contains no PCBs," "contains less than 1 ppm PCBs," etc. As long as the item having such a label has never been serviced with dielectric fluid containing PCBs, it should not fall under the regulations. Use the maintenance records for the equipment to verify it has not been serviced with PCB-containing fluid.

USEFUL TIP

The term "non-PCB" on the nameplate of a transformer probably only means the oil contains less than 50 ppm, so this statement cannot be relied on to show the transformer or capacitor does not contain any PCBs.

Look at the nameplate

The nameplate on transformers or capacitors may state the type of dielectric fluid contained in the item. If the equipment is mineral oil-filled,

it will usually indicate the gallons of oil present in the item, and may indicate the type of oil. Mineral oil-filled equipment typically does not contain PCBs, but some equipment may sometimes have small concentrations of PCBs that were inadvertently introduced into the equipment during the manufacturing process.

Items manufactured with high concentration PCBs

Transformers and capacitors also may intentionally have been manufactured with substances which have very high concentrations of PCBs. These high-concentration PCB substances were manufactured under several different trade names. Tables 2-1 and 2-2 list PCB fluid names for various manufacturers of transformers and capacitors containing high concentrations of PCBs. If the nameplate on the transformer or capacitor has one of the names on Tables 2-1 or 2-2, you must assume the item is a PCB transformer or capacitor (i.e., it has 500 ppm or greater PCBs in the dielectric fluid). The lack of one of these trade names on a nameplate is not a guarantee that the equipment does not contain high concentrations of PCBs. You will need to review maintenance records (see box) if they are available to see if the item was serviced with dielectric fluid which contained high concentrations of PCBs.

USEFUL TIP

Keep your maintenance records up to date and accurate. Without these records, you cannot document the PCB content of your electrical equipment.

How an item can be determined non-PCB

If the label or nameplate does not indicate whether the item contains PCBs, you might be able to call the manufacturer with the make, model and serial number of the item. If the manufacturer indicates the item was not manufactured with PCB-containing dielectric fluid, and your maintenance records show it was not serviced with PCB-containing dielectric fluid, the unit can be considered non-PCB.

How Do I Determine the PCB Concentration of My Equipment?

If a piece of equipment is not marked by the manufacturer with the PCB content, and no further information is known (as discussed above), you must either test the dielectric fluid, or assume it contains PCBs and manage the item according to the regulations summarized in Sections

Table 2-1. PCB Fluid Names for Various Makes of Transformers

PCB TRANSFORMER MANUFACTURERS	PCB FLUID NAMES
Allis-Chalmers	Chlorextol
American Corporation	Asbestol
ESCO Manufacturing Co.	Askarel
Ferranti-Packard Ltd.	
Hevi-Duty Electric	
Research-Cottrell	
General Electric	Pyranol
ITE Circuit Breaker Co.	Non-Flammable Liquid
Kulman Electric	Saf-T-Kul
Monsanto (fluid only)	Aroclor
Niagara Transformer Corp.	Askarel, EEC-lB
Power Zone Transformer	EEC-l8
Wagner Electric	No-Flamol
Westinghouse	Inerteen, Nepolin, Dykanol
Electro-Engineering Works	various fluid names
Envirotech Buell	
H.K. Porter	
Helena Corp.	
Maloney Electric	
Standard Transformer Corp.	
Uptegraff Manufacturing Co.	
Van Tran Electric	

Table 2-2. PCB Fluid Names for Various Makes of Capacitors

PCB CAPACITOR MANUFACTURERS	PCB FLUID NAMES
Aerovox	Hyvo1
Cornell Dubiller	Dykano1
Electrical Utilities Corporation	Eucarel
General Electric	Pyranol
Jard Corporation	Clorphen
McGraw Edison	Elemex
Monsanto (fluid only)	Aroclor, Capacitor 21, MCS 1489
P.R. Mallory & Company	Aroclor B
Sangamo Electric Company	Diaclor
Sprague Electric Company	Clorinol
Universal Manufacturing Corporation	Askarel
Westinghouse	Inerteen
Axel Electronics	various fluid names
Capacitor Specialists	
Electromagnetic Filter Company	
R.F. Interonics	
Tobe Deutschmann	
York Electronics	

Assumption rule

2.4.2 through 2.5. If you do not know the PCB concentration of an item, you must assume it is either PCB (having 500 ppm PCB or greater in the fluid) or PCB-contaminated (having 50 to 499 ppm PCB in the fluid). This is called the assumption rule. The assumption rule varies for each type of equipment. The following summarizes the assumption rule for the equipment discussed in this chapter:

- Transformers and capacitors for which no information (i.e., transformer with no nameplate and cap) is known, must be assumed to be PCB.
- Transformers that have mineral oil dielectric fluid and for which no further information is available must be assumed to be PCB-contaminated.
- Switches, voltage regulators, and fluorescent light ballasts for which no information is known must be assumed to be PCB-contaminated.
- Circuit breakers and reclosers for which no information is known may be assumed to be non-PCB.

Consider testing transformers

For power transformers and voltage regulators that have built-in sampling ports, it may be worth the cost of having the dielectric fluid in the unit tested by an analytical laboratory. The reason for this is that the requirements for managing these large PCB units can be significant and cumbersome (see Section 2.4.2 for details), and these types of units have a high risk if they fail because of the volume of fluid they contain. In addition, requirements for disposal vary depending on the PCB concentration in the dielectric fluid (see Section 2.4.8). Sealed equipment (capacitors, fluorescent light ballasts, oil circuit breakers and reclosers) cannot be tested until they leak or are taken out of service for disposal. However, for purposes of disposal, it might be economically worthwhile to test sealed units once they leak or are taken out of service for disposal. Many dispose of these items as PCB waste rather than testing - which could be an added expense if the unit is non-PCB.

USEFUL TIP

It is not recommended to test pole transformers while they are in service because this requires drilling a hole to remove the fluid. Drilling a hole can introduce metal filings into the unit (which can cause catastropic failure), or can allow moisture to penetrate the unit (which can cause chronic failure). When a pole transformer is removed for maintenance or repair, the facility your cooperative sends the transformer to will automatically test the unit as part of the repair or maintenance activity.

Laboratory testing procedures

For testing of the dielectric fluid, EPA recommends that gas chromatography (GC) analysis be performed by a laboratory on samples from any of the openable or sealed units described above. If you are collecting the samples, before you submit them to the laboratory, you should establish sampling procedures that are accurate, reproducible, and assure quality control (see box). If you follow these recommendations, you can rely on the results of a GC analysis. Keep the test result report you receive from the laboratory (or the maintenance facility) with the maintenance records for the piece of equipment so you know the proper type of fluid for refilling it, and can prove the PCB concentration of the unit.

RESOURCE

The EPA Methods Information Communication Exchange (MICE) support line (run by EPA's Office of Solid Waste) will assist you in developing sampling procedures (for your dielectric fluid) that will assure EPA will accept your sample results. This support line is menu-driven, and you must leave a message for a technical expert to return your call. The telephone number for the MICE line is (703) 821-4690.

2.4.2 Use Requirements for Specific Equipment Types

This section presents specific requirements (including labeling, inspection, reclassification, storage and disposal) for using the most common types of electrical equipment used by cooperatives.

USEFUL TIP

TSCA does not contain requirements for non-PCB equipment, but it is recommended that they be managed similar to PCB-contaminated equipment because of the stringent requirements for spills of any liquids containing more than 2 ppm PCBs.

PCB-contaminated Transformers and Capacitors

Requirements for PCB-contaminated transformers and capacitors

The requirements for handling PCB-contaminated (50–499 ppm PCBs) transformers and capacitors are not as numerous or stringent as those for PCB transformers and capacitors. Specific use requirements for PCB-contaminated transformers and capacitors are as follows:

- Owners must follow the transformer servicing requirements (discussed in Section 2.4.5) as they apply to PCB-contaminated units. Since capacitors are sealed units, they do not have servicing requirements.

- Transformers and transformers capacitors must be intact and not leaking.

- Leaking transformers must be repaired or replaced, and leaking capacitors or transformer bushings (see below for discussion on brushings) must be disposed. Until appropriate repair and cleanup are completed, any active leak must be contained, daily inspections must be done, and a written record of the inspections must be made (see Section 2.4.4). An example of a leaking item inspection log is provided in Section 2.6.6.

- Any PCBs which leak or seep from a PCB-contaminated transformer or capacitor must be properly cleaned up (see Section 2.5 and Chapter 7 for spill cleanup information). All contaminated cleanup materials must be disposed as PCB waste (see Section 2.4.8). Cleanup of PCBs must be initiated promptly, and in no case later than 48 hours after discovery of the leak.

PCB-contaminated capacitors and transformers can be used for the entirety of their useful lives.

PCB Transformers and Capacitors

Additional requirements for PCB transformers and capacitors

If you have a PCB transformer or capacitor (500 ppm or greater), you must comply with all of the requirements discussed above for PCB-contaminated units, plus a number of additonal requirements. These additional requirements are summarized below.

- Mark transformers and all access to them. Marking requirements are provided in Section 2.4.3.

- Inspect each transformer or capacitor once per quarter and keep records of the inspections (unless the item meets requirements in the rules for yearly inspections). An example inspection record is provided in Section 2.6.6, and inspection requirements are provided in Section 2.4.4.

- You may not use PCB transformers in any area which poses an exposure risk to food or feed. This means that if your transformer leaked or spilled, and the PCBs could get to the food or feed, you may not use the transformer in that area.

Check your customer list to ensure that there are no PCB transformers that pose an exposure risk to food or feed.

- Do not use a PCB transformer with secondary voltages equal to or greater than 480 volts in or near a commercial building. There are restrictions on use of lower voltage PCB transformers in or near commercial buildings as well.

- Register each PCB transformer in writing with your local fire department if it is in use or stored for reuse (an example registration form is provided in Section 2.6.6). The registration includes the physical location, principal constituent of the dielectric fluid (PCBs, mineral oil, etc.), contact person and phone number. Each PCB transformer in or near a commercial building must also be registered with the building owner.

- Comply with servicing conditions detailed in Section 2.4.5.

- Comply with spill/leak requirements discussed above, and detailed in Section 2.5.

WHAT DO I DO IF I DISCOVER I HAVE A PCB TRANSFORMER?

If you test your transformer dielectric fluid which has been assumed to contain 50-499 ppm PCBs, and find out that it in fact contains 500 ppm PCBs or greater (i.e., is a PCB transformer), you must either label the unit and send it for disposal (see Section 2.4.8) or do the following to get the transformer into compliance:

- Report any fire related incidents involving the PCB transformer immediately to the National Response Center (see Section 2.5).
- Mark the transformer and access to the transformer within 7 days (see Section 2.4.3).
- Register the PCB transformer with the Fire Department within 30 days (see example form in Section 2.6.6 and discussion in Section 2.5).
- If the PCB transformer is in or near a commercial building, register it with the building owner within 30 days (see example form in Section 2.6.6).
- Come into compliance with the enhanced electrical protection requirements in the rules within 18 months of discovery.
- Comply with the rest of the rules (summarized in this document) which apply to PCB transformers.

These requirements can be found in the regulations at 40 CFR Part 761.30(a)(1)(xv).

Bushings

Bushings are part of the transformer, regardless of type of oil in them.

Bushings on transformers are considered by EPA to be part of the transformer because they have been in contact with the dielectric fluid in the transformer, and because the regulations assume that an intact transformer contains the component parts necessary for tansformer operations. Thus, unless you can prove otherwise (i.e., by wipe sampling the exterior of the bushing), regardless of the type of dielectric fluid in the bushing, if it is from a PCB transformer, it is considered PCB, and if it is from a PCB-contaminated transformer, it is considered PCB-contaminated.

Determine the classification of oil-filled bushings during maintenance or repair.

When bushings are removed from a transformer as part of maintenance and repair of the unit, the shop will evaluate the capability of the bushing to be reused on the unit. Regardless of classification of the bushing, it can be reused if suitable. However, it is important to note that bushings from non-PCB power transformers may be filled with PCB dielectric fluid. Therefore, it is important to determine the classification of bushings from non-PCB power transformers. To test an oil-filled bushing, a sample of the dielectric fluid from the unit may be collected by loosening or removing the endcap and gasket from the bushing.

Caution on reuse of PCB bushings

If an oil-filled PCB bushing fails while in service, the oil leaked (as a result of the failure) most likely will contaminate the transformer it is attached to (i.e., a non-PCB transformer would then become a PCB transformer), and the failure will be considered a PCB spill. Thus, your cooperative could be at a high risk of financial liability for a PCB spill if PCB bushings are reused. It is recommended that you determine the classification of oil-filled bushings on your non-PCB transformers when they have been removed from service (see above). PCB bushings on non-PCB transformers should be replaced, and the PCB-bushing disposed.

Storage and disposal of bushings

The storage and disposal of bushings is the same as for other PCB, PCB-contaminated, or non-PCB articles. As discussed above, any oil-filled bushing must be assumed PCB for disposal purposes, and any bushing from a PCB or PCB-contaminated transformer must be classified the same, regardless of the type of oil in an oil-filled unit, unless the exterior is sampled and found not to be contaminated with PCBs.

Oil Switches and Voltage Regulators

Voltage regulators and switches are used to control, transmit and distribute electric power efficiently. Although most of the equipment is mineral oil-filled and was not designed to contain PCBs, dielectric fluid in

them may have become contaminated with PCBs through past maintenance and servicing activities. In addition, voltage regulators are particularly susceptible to PCB contamination as they often contain a small PCB starter capacitor which easily contaminates the regulator's mineral oil dielectric fluid if it ruptures or leaks. PCB and PCB-contaminated switches and voltage regulators may be used for the entirety of their useful lives.

Electrical Light Ballasts

An electric light ballast is the primary component of fluorescent light fixtures. These items generally are located within the fixture under a metal cover plate. The function of a ballast is to accumulate and hold a charge of electricity.

A ballast unit typically is composed of a transformer to reduce the incoming voltage, a small capacitor (containing 0.1 kg (0.2 lb) or less of dielectric fluid), and, possibly, a thermal cut-off switch and/or safety fuse. The components of the ballast are surrounded by a tar-like substance that is designed to muffle the noise that is inherent in the operation of a ballast. Ballasts also contain potting material to absorb the dielectric fluid, should the capacitor fail.

USEFUL TIP

It is not recommended that you try to repair a failed ballast because of the risk of releasing PCBs on opening the unit.

Capacitors in ballasts may contain PCBs in the dielectric fluid. According to EPA, all small capacitor light ballasts manufactured through 1979 contain PCBs (EPA 1992). There would be approximately 1 to 1½ ounces of PCBs in each capacitor. Ballasts manufactured after 1979 that do not contain PCBs are labeled "No PCBs." **If a ballast containing PCBs fails, the capacitor may break, contaminating the surrounding tarry material and the potting material.**

Ballasts may contain PCBs. Handle them carefully.

It is crucial to find out if a ballast containing PCBs is leaking before it is removed from the fixture, so that it can be handled appropriately. If a PCB ballast has been punctured or damaged, the oily tar-like substance may be oozing out of the unit. If your ballast appears to be leaking, the ballast and all materials it contacts are considered PCB waste and must be disposed of according to the regulations (discussed in Section 2.4.8). It is important that you remove, handle and dispose of PCB-containing ballasts properly to prevent exposure to the leaking ballasts. All materials

that contact the ballast or the leaking substance are also considered PCB waste.

Circuit Breakers and Reclosers

Circuit breakers and reclosers are types of sealed oil-filled electrical equipment generally not designed to contain PCBs. However, a small percentage of this electrical equipment does contain PCBs as a result of the manufacturing process. Because most reclosers were manufactured without PCBs, they may be assumed to be non-PCB (see Section 2.4.1).

PCB and PCB-contaminated circuit breakers and reclosers may be used for the entirety of their active lives. Circuit breakers and reclosers containing PCBs may be stored for reuse for an unlimited amount of time, as long as they are in a condition suitable for reuse.

2.4.3 What PCB Equipment Must Be Marked?

USEFUL TIP

EPA calls PCB labels "marks." Thus, you must "mark" your PCB transformers and capacitors.

PCB transformers or capacitors (500 ppm or above) must be marked with the appropriate PCB label (see box). Marking of voltage regulators, circuit breakers, switches, and reclosers is not required (see EPA Q&A Manual, 1994). Marking of PCB-contaminated equipment of any kind is not required. Rules for marking can be found at 40 CFR Section 761.40.

How and When Do I Use the Labels?

PCB transformers and capacitors are marked with a large PCB label or a small PCB label depending on the size of the transformer. The large PCB label is called the M_L mark. The small PCB label is called the M_S mark. All PCB labels must be clearly visible.

The large PCB mark (Figure 2-1) typically is 6 × 6 inches, but may be reduced to 2 × 2 inches if space is limited. It should be used if it will fit

Figure 2-1. Large PCB Mark

on the equipment. It also should be used to mark drums and areas where PCBs are being stored.

The small PCB mark (Figure 2-2), typically 1 × 2 inches, may be used when the large PCB label will not fit on the PCB equipment.

What Must Be Marked?

What to mark

The following items must be marked with the appropriate PCB label:

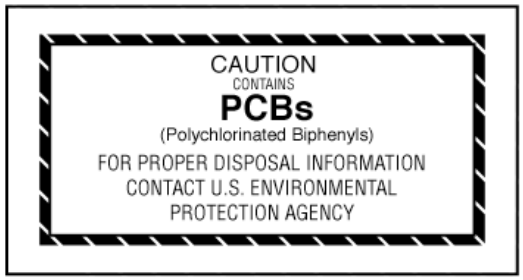

Figure 2-2. Small PCB Mark

- PCB transformers (500 ppm or greater).
- Large PCB capacitors (contain 3 lbs. or more of dielectric fluid) with operating voltages greater than or equal to 2,000 volts (i.e., "high voltage" capacitors).
- The pole or structure holding any large, high-voltage PCB capacitor, or any fence if the high voltage PCB capacitor is behind it.
- Equipment containing a PCB transformer or large, high-voltage PCB capacitor.
- Large, low-voltage PCB capacitors, at the time of removal from service for disposal.
- Drums of PCB oil, debris, etc. (50 ppm or greater).
- Vehicles used to transport more than 99.4 lbs. of oil containing PCBs or one or more PCB transformers.

Access must be marked.

To warn employees and fire/emergency response personnel that PCB equipment is present, the access to each PCB transformer and capacitor also must be marked with the PCB M_L mark. "Access" means the vault door, room door, fence, archway, hallway, etc., but does not include grates or manhole covers. Markings should be placed in such a way that a person approaching the area can see the label before entering the actual area.

2.4.4 Inspection Requirements

POLLUTION PREVENTION TIP

The benefits of regular inspections increase by conducting them more frequently than the regulations require.

Inspections are required for most items containing PCBs, and should be considered part of the maintenance procedures for those items. While the regular inspection of items containing PCBs will not reduce the occurrence of leaks, they will ensure that leaks and other faults are discovered in a timely manner and can be repaired immediately before any environmental damage occurs. Table 2-3 presents the items that must be routinely inspected for leaks and the required frequency of inspection for each item.

Table 2-3. Routine Inspection Frequency

Item	Inspection Frequency
PCB Transformers	Required quarterly; annually if PCB concentration in dielectric fluid is less than 60,000 ppm and/or transformer(s) have secondary containment.
PCB Capacitors	Recommended annually
PCBs and PCB fluids (>50 ppm) in storage for use in servicing equipment	Required monthly
PCB and PCB-contaminated switches and voltage regulators	Recommended quarterly. PCB (500 ppm or greater) items must be inspected weekly when near food or feed. Items in use in non- food or feed areas do not require recorded inspections, but these are recommended.
PCB items stored for reuse	Same as if item is in-service
Items in storage for disposal facility	Required every thirty days

Written inspection records required

A written record of all inspections must be made (except for voltage regulators and switches in use in non-food and feed areas, and written inspections for these are highly recommended). Examples of inspection reports are provided in Section 2.6.6. At a minimum, records of inspections must contain the following information:

- Location of the item.
- Date of each inspection.
- Name of person performing inspection.
- Date on which any leak is discovered.

Inspecting leaking items

Any item in storage or service that has a leak must be inspected daily from the time the leak is detected until the leak is repaired. An example of a leaking item inspection report is provided in Section 2.6.6. At a minimum, the leak inspection record must include:

- Location of leak(s) (e.g. exactly what point of an item is leaking).
- Estimate of amount of fluid released.
- Date of cleanup, containment, repair, or replacement.
- A description of any cleanup, containment, or repair performed.
- The results of any containment and daily inspection required for uncorrected active leaks.

Any leaks must be cleaned up promptly, and in no case later than 48 hours after discovery of the leak.

Written records of inspections and the maintenance history must be maintained and made available for inspection upon request by EPA until at least three years after that particular article is disposed (based on the date on the certificate of destruction).

2.4.5 Servicing Requirements

Types of fluid for servicing equipment

Servicing activities include draining and refilling, topping off, repairing and retrofilling for reclassification. PCB equipment may be serviced (including topping off) with dielectric fluid at any PCB concentration. PCB-contaminated equipment may be serviced only with dielectric fluid containing less than 500 ppm PCB. Although it is not required, PCB equipment (other than Askarel-type transformers) and PCB-contaminated equipment should be topped off and serviced with dielectric fluid containing no PCBs. **Service non-PCB items only with non-PCB dielectric fluid.**

USEFUL TIP

Any servicing (including rebuilding) of PCB transformers, switches or voltage regulators that requires the removal of the coil from the casing is prohibited.

You can reuse dielectric fluid in same unit

Since the distribution of PCBs at concentrations of 50 ppm or greater is prohibited, PCB or PCB-contaminated equipment can be serviced with your own PCB or PCB-contaminated fluid if you already own it. Dielectric fluid with a PCB concentration of 50 ppm or greater, can be reused in a unit as dieletric fluid if it was removed from the same unit during servicing. Servicing with non-PCB or PCB-free fluid is also allowed. Any dielectric fluid containing 50 ppm or greater PCBs used for servicing must be stored in accordance with the storage for disposal requirements.

USEFUL TIP – MIXING RULE

If dielectric fluid containing less than 500 ppm PCBs is mixed with fluid containing 500 ppm or greater PCBs, then the resulting mixture must not be used as dielectric fluid in any electrical equipment. The entire mixture must be considered to be greater than 500 ppm PCBs and must be disposed of in accordance with EPA requirements (see Section 2.4.8).

2.4.6 Reclassification Requirements

Reclassification of a PCB or a PCB-contaminated item is a process where you reduce the concentration of PCBs in the dielectric fluid by replacing the fluid to a concentration where the item falls into a new classification level. PCB items may be reclassified to a PCB-contaminated or non-PCB item by draining, refilling, and otherwise servicing the unit. PCB items that end up with a PCB concentration less than 500 ppm can be reclassified as PCB-contaminated, and items that end up with a PCB concentration less than 50 ppm can be reclassified as non-PCB.

USEFUL TIP

Reclassification of an item to PCB-contaminated or non-PCB reduces the risks associated with operating the item as well as the number of requirements that apply to the item.

Testing flushed and refilled item

After draining and refilling the item with new oil, it must be operated under normal load for at least three months. At the end of the three month period, if the dielectric fluid is tested and found to be less than 50 ppm or less than 500 ppm, it is reclassified (see Section 2.4.1 for details on testing dielectric fluid). Please note that the EPA has proposed

USEFUL TIP

Reclassification of PCB or PCB-contaminated pole mount transformers generally is not economical. Service companies can conduct the retrofil and testing activities for you.

rules which will change the requirements for reclassification. If you decide to reclassify your transformer, please check with EPA's TSCA Hotline (see Section 2.7.2) to see if the new rules are in effect.

2.4.7 Storage for Disposal Requirements

There are three types of areas that a cooperative can have for storage prior to disposal. They are permanent storage for disposal, temporary storage for disposal, and pallet storage for disposal. It should be noted that any equipment used in the areas for handling the stored materials that come in direct contact with the PCBs cannot be removed from the area until it is decontaminated according to the requirements in 40 CFR Section 761.79.

There are very specific requirements for storing PCB equipment that has been removed from service and is to be disposed of, as well as for fluid containing PCBs that is intended for disposal. Complying with storage requirements involves the following five basic elements:

- Establish a proper storage facility for PCBs.
- Utilize proper containers for PCB storage.
- Manage storage area(s) in accordance with marking, recordkeeping, and inspection requirements (summarized in this Chapter).
- Understand which PCBs and PCB items require storage and the various storage options available.
- Remove PCBs and PCB items from storage and dispose of them within the 1-year time limitation.

USEFUL TIP

The storage requirements for PCBs and PCB items have remained virtually the same since the PCB regulations were set out. However, the improper storage of PCBs remains one of the most frequent areas of non-compliance based on EPA inspection reports for regional EPA offices.

Note: Equipment in storage for reuse is considered to be "in service" and does not have to be managed according to these storage requirements.

Requirements for Storage for Disposal Areas

Elements of successful storage program

All articles and containers in permanent or temporary storage for disposal areas must be inspected for leaks monthly (as discussed in Section 2.4.4). These inspections must be documented, and an example of an inspection form for storage for disposal areas is provided in Section 2.6.6.

Requirements for Permanent Storage for Disposal Areas

If you store your own PCB waste and have a permanent storage for disposal area, or you store your waste for more than 30 days, you must notify EPA and you must have an EPA identification number (see box). Cooperatives required to have an EPA identification number for their PCB activities must file EPA Form 7710-53 "Notification of PCB Activity." This form can be obtained from your Regional EPA office, and from NRECA. EPA will assign a number to your cooperative. If you have more than one facility in your cooperative, you must have an WPA identification number for each facility. This notification was supposed to have been done by April 1990. If you are a temporary storer (i.e., you do not have a permanent storage area), and store for less than 30 days, an I.D. number is not required.

USEFUL TIP

If you already have an identification number as a hazardous waste generator as required by RCRA (see Chapter 3, section 3.3.2), all you have to do is notify EPA of your PCB storage activities and amend your status to include those activities. You must have a number for each *separate* facility within your cooperative (but not for multiple storage areas at one facility) where you store PCBs.

EPA notification of PCB activity requirements and procedures

All transporters, commercial storers and disposers of PCB waste must have an EPA identification number. Cooperatives are not usually transporters or commercial storers and disposers of PCB waste, so long as they do not accept PCB waste from anyone other than their own members. If your cooperative does accept PCB waste from others (i.e., it is a commercial storer and disposer), you must comply with a large number of requirements, including permitting, recordkeeping, etc. These requirements are not discussed in this document, and it is recommended that your cooperative manages only its own PCB waste.

The following are specific requirements for permanent PCB storage for disposal areas:

- The area must have an adequate roof and walls to prevent rain water from reaching stored items and to prevent the accumulation of standing water.

- The area must have floors and continuous 6-inch high curbing. The floor and curbing must 1) be constructed of smooth and impervious materials (i.e., Portland cement, concrete or steel); and 2) provide a containment volume equal to at least two times the internal volume of the largest article or container being stored, or 25 percent of the total volume of all articles or containers stored, whichever is greater.

- The area cannot be located near or have access to drains, valves, expansion joints or sewer lines, or be within the 100-year flood plain.

- The area must be marked with a large PCB label (as described in Section 2.4.3). All doors to the building containing the permanent storage for disposal area (if such an area is within a building) also must be marked.

- Drums of PCB oil/debris and PCB equipment must have the date they were removed from service for disposal marked on them, and they must be labeled with the M_L mark.

- Each drum of PCB oil/debris must have a record of the quantity of each batch of PCBs added to the drum and the earliest date each batch was added to the drum.

- The equipment and drums in the area must be inspected for leaks at least once every 30 days, and any leaked liquids cleaned up immediately (see Section 2.5, or Chapter 7 for details on cleaning up leaked material).

- Any leaking containers and articles must be transferred immediately to properly marked non-leaking EPA-approved PCB containers.

Figure 2-3 provides an example of a permanent storage area. There are no requirements in the regulations for permanent storage areas other than the ones above. This sketch is a suggestion for how a cooperative could set up a storage area. The sketch shows a receiving area. If you set up your storage area like the sketch, equipment is first brought to this receiving area for decision on what to do with it, and for marking and recordkeeping. If the equipment is going to be disposed of, it should be

moved to the storage for disposal area. If you know you will repair and reuse the equipment, or you do not yet know whether you will repair it or reuse it, put it in the storage for reuse area. In any of these areas, if the equipment is leaking or weeping, it must be cleaned up immediately according to the requirements in Section 2.5.

Requirements for Temporary Storage for Disposal Areas

There are very specific requirements for temporary storage for disposal areas

Temporary storage for disposal areas may be used only if you store your articles or containers for less than 30 days from removal from service, the equipment is not leaking, and any liquids in drums or containers have PCB concentrations of less than 500 ppm. If you meet these criteria, you may use a temporary storage for disposal area, and you do not have to notify EPA of PCB activities (as discussed above under permanent storage for disposal areas) or have to have an identification number. The following are specific requirements for temporary storage for disposal areas:

- The equipment or container must have an attached notation which states the date the equipment or container was removed from service.
- Only non-leaking articles or equipment may be stored in this type of area. Leaking articles or equipment must be placed in a non-leaking container that contains enough absorbent material to absorb any liquid PCBs remaining in the item.
- No drums with liquids having a PCB concentration equal to or greater than 500 ppm may be stored in this type of area.
- Drums of liquids that have a PCB concentration of 50 to 499 ppm may be stored in the area if the area has a spill prevention, control and countermeasure plan (see Section 2.5 and Section 7). Each drum must have a notation that says the liquids in the drum do not exceed 500 ppm.

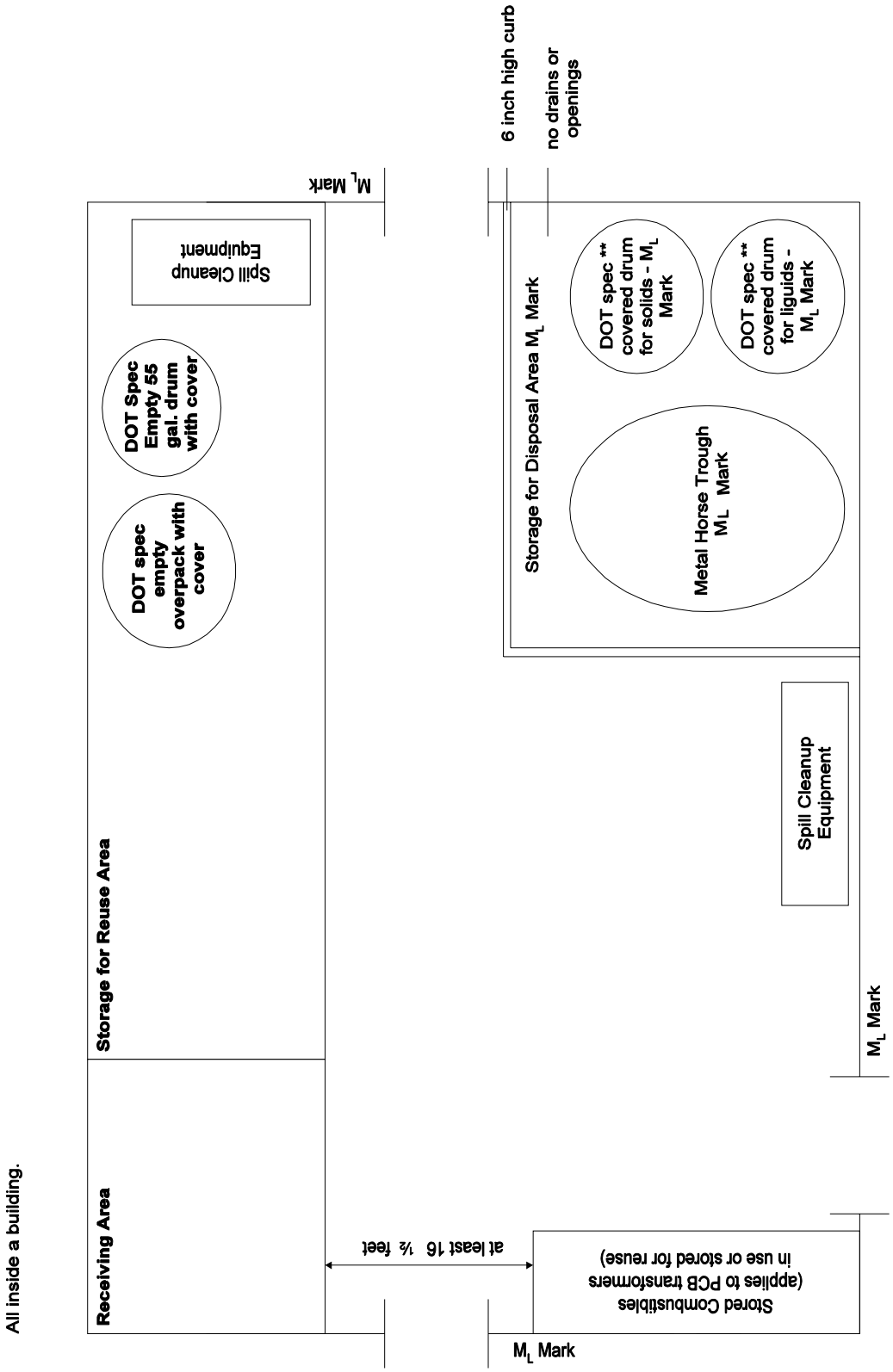

Figure 2-3. Example Permanent Storage Area

- The area must be marked with a large PCB label (as described in Section 2.4.3).
- Non-liquid items contaminated with PCBs (soil, rags, etc.) may be stored in containers.
- The area must be inspected for leaks at least once every 30 days, and any leaked material immediately cleaned up (see Section 2.5, and Chapter 7 for details on leaks and spills).

Requirements for Pallet Storage for Disposal

Non-leaking and structurally undamaged large, high voltage PCB capacitors and PCB-contaminated equipment may be stored on pallets next to the permanent storage for disposal area if the permanent area has unfilled storage space for at least 10 percent of the volume of the capacitors and equipment stored on pallets. This area must be inspected weekly, and leaks cleaned up immediately.

One-year Storage Limitation

As previously mentioned, PCBs and PCB items stored for disposal must be disposed of within one year. The one-year storage limit includes the time it takes the disposal facility to properly dispose of the PCB material. The disposal facility should be given at least 3 months to dispose of the PCB material. If the PCB material is not disposed of within the one-year time frame, the disposal facility is required to report any missed deadlines to the EPA, and the cooperative can be held legally responsible for not following the rules. Therefore, for your cooperative to avoid being held responsible, the PCB material must be removed from storage at your cooperative and sent to the disposal company within 9 months from the date when it was first removed from service for disposal.

2.4.8 Disposal Requirements

Any items containing regulated levels of PCBs (50 ppm or greater) must be disposed of in accordance with the regulations to minimize exposure to humans and the environment. The regulations governing disposal of PCBs include

USEFUL TIP

Superfund regulations require that building owners and waste generators (i.e., cooperatives) notify the National Response Center at (800)424-8802 when a release of a pound or more of PCBs occurs, or when disposing of a pound or more of PCBs in a 24-hour period.

Superfund (see box) as well as TSCA. TSCA Disposal requirements vary depending on the type of item, and the concentrations of PCBs in the dielectric fluid in the item, or of the liquid in a container (see Figure 2-4). After your PCBs or PCB items have been disposed of, you should receive a certification of disposal from the disposal contractor. Keep this certification with your other records for the PCBs or PCB items.

Liability caution - deal with reputable disposers

Cooperatives should be careful to deal with reputable disposal facilities that are properly permitted (ask the disposal facility for its EPA identification number, as well as what types of permits it holds, and for copies of those permits). A list of approved disposal facilities can be obtained by calling your EPA Regional office. Discuss the requirements detailed below with your disposal contractor, and agree on the disposal method before sending your waste to the contractor. If the disposal contractor does not dispose of the PCB waste properly, your cooperative could be held liable for environmental damage caused by the improper disposal. The following details the proper disposal methods for various types of PCBs or PCB items.

- ***Liquids containing above 500 ppm PCBs.*** These must be incinerated in an incinerator which meets the requirements of 40 CFR 761.70 or be granted an alternative disposal approval (i.e., chemical detoxication) as discussed in 40 CFR 761.60.

- ***Liquids containing 50–499 ppm PCBs.*** These must be incinerated, burned in a high efficiency boiler that meets the requirements of 40 CFR 761.70 , disposed of by an approved alternate disposal method (such as chemical detoxification) that meets the requirements of 40 CFR 761.60, or solidified and placed in a TSCA-permitted chemical waste landfill. Containers holding free liquids cannot be placed in any landfill unless the liquid is removed, mixed with non-biodegradable sorbent (i.e., solidified), or otherwise eliminated. Solidified liquid waste containing greater than 50 ppm PCBs can only be placed in a hazardous waste landfill that has a TSCA permit.

- ***Non-liquid PCBs.*** PCB wastes such as contaminated soil and debris, must be incinerated or disposed of in a TSCA-permitted chemical waste landfill.

- ***PCB (500 ppm or greater) transformers, bushings, voltage regulators, switches, circuit breakers, reclosers, and cable.*** These items can be incinerated in a unit that meets the

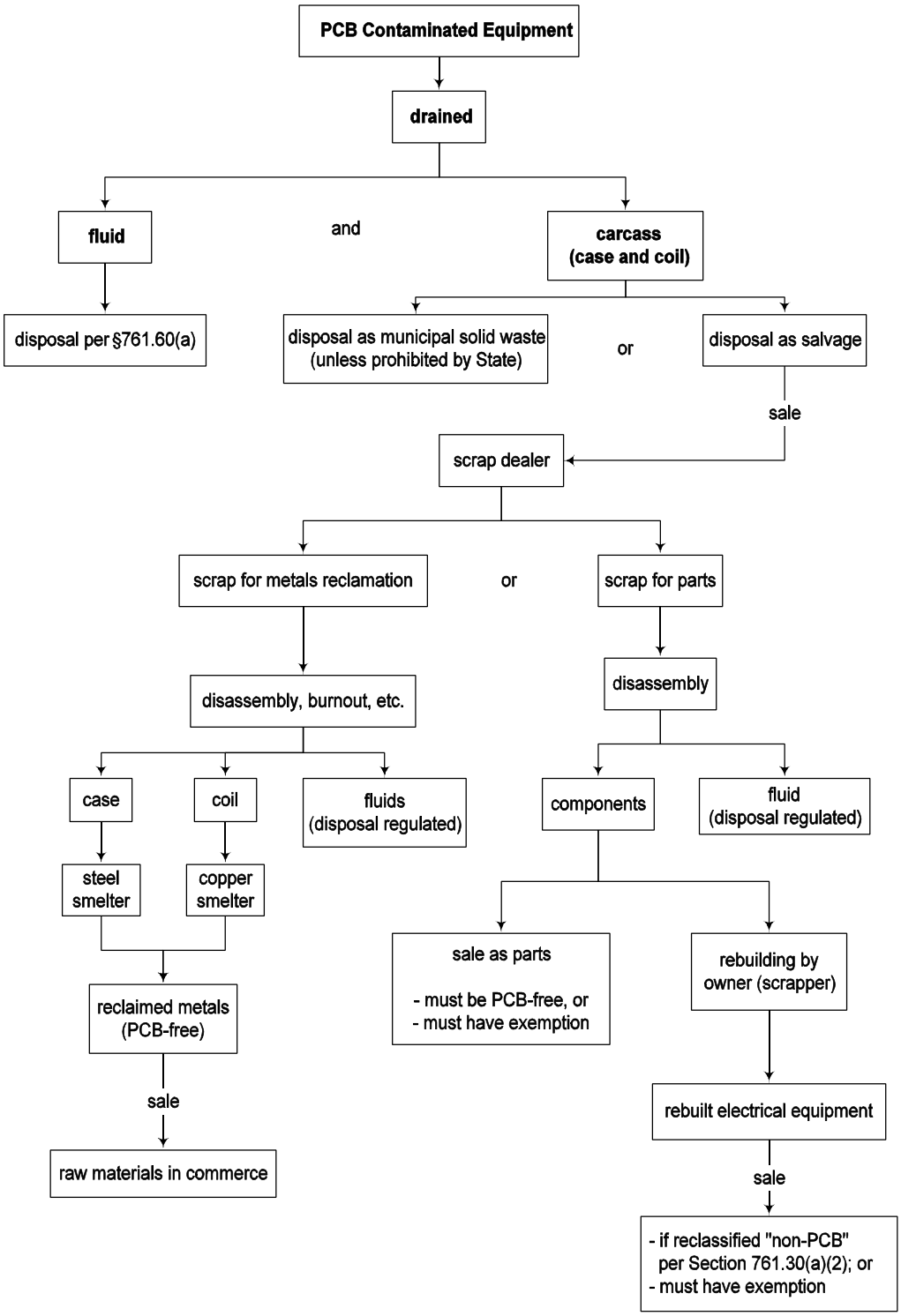

Figure 2-4. Salvage Options for Drained Carcasses under 500 ppm PCBs

requirements of 40 CFR 761.70. They also can be disposed of in a TSCA-permitted chemical waste landfill, that meets the requirements of 40 CFR 761.75 if the liquid PCBs are drained from the item; the drained carcass filled with solvent (kerosene, xylene, toluene, or other solvents in which PCBs are readily soluble); and allowed to stand for at least 18 hours before being drained thoroughly. The PCB-liquids and contaminated solvent must be disposed of as discussed above for PCB-liquids. Alternate disposal methods for the carcasses include carcass decommissioning. There are also some commercial facilities which have an alternate disposal approval to decommission PCB equipment, sending the metal components for recycling and disposing of the remainder.

- ***PCB-contaminated (50–499 ppm) transformers, bushings, voltage regulators switches, circuit breakers reclosers and cable.*** These items can be disposed of in an approved, high-efficiency boiler that complies with 40 CFR 761.65, in a permitted chemical waste landfill that meet the requirements of 40 CFR 761.75, or they can be drained, and the liquids disposed of as discussed above for PCB-liquids. Drained carcasses need not be rinsed, and their disposal is not regulated. However, they cannot be sold for use as parts and components in repair or rebuilding activities. They may be scrapped or salvaged for metals recovery provided that any residual PCBs are destroyed during metals recovery. EPA approved alternate disposal methods also are allowed for PCB-contaminated transformers, voltage regulators and switches, if the methods meet the requirements in 40 CFR 761.60.

- ***Large PCB capacitors.*** These items must be incinerated as discussed in 40 CFR 761.70 or disposed of by an approved alternate disposal method as discussed in 40 CFR 761.60.

- ***Non-leaking electric ballasts which contain PCBs and small PCB capacitors.*** Currenly, under the EPA PCB rules, these items may be disposed of as municipal solid waste. However, EPA is planning to amend the rules to

USEFUL TIP

Many States have developed regulations governing the disposal of non-leaking PCB containing ballasts that are sometimes more stringent than the Federal regulations. Contact your regional EPA and State solid and hazardous waste agencies to learn of any additional regulations that may apply.

limit the number of ballasts which may be disposed of as municipal solid waste. Cooperatives also should be aware that some State laws prohibit disposal of these items in a municipal solid waste landfill (see box). It is recommended that the non-leaking PCB ballasts or capacitors are first packed with absorbent packing material and sealed in containers prior to disposal.

Disposal of ballasts may pose Superfund liability

Cooperatives should consider future potential Superfund liability for environmental damage when choosing how to dispose of small capacitors or electric light ballasts containing PCBs. Cooperatives that dispose of any quantity of small PCB capacitors and electric light ballasts in municipal solid waste landfills may have Superfund liability. Alternative methods such as recycling, which are more protective of the environment are recommended. Recycling involves first removing the PCB-containing materials for incineration or land disposal and reclaiming metals used in the carcass for manufacturing other products. A list of ballast recyclers is provided at the end of this chapter.

- ***Leaking PCB-containing fluorescent light ballasts.*** Leaking PCB-containing ballasts must be incinerated at an EPA-approved high temperature incinerator or through recycling (a list of recyclers is provided at the end of this chapter in Section 2.7.5). High temperature incineration is more expensive than recycling, but this method is often preferred since the PCBs are completely destroyed removing them from the waste stream permanently. Therefore, high temperature incineration also removes the potential for future liability. The leaking PCB ballasts or capacitors must be packed with absorbent packing material and sealed in containers prior to disposal.

Manifesting Your PCB Waste for Transportation to the Disposal Contractor

General manifesting information

You must manifest your PCB waste (50 ppm PCBs or greater) when you ship it off-site for disposal. A manifest is a shipping document which accompanies the shipment of PCB waste. Chapter 4 provides detail on manifesting and transportation requirements for hazardous materials, which include PCB wastes. The following summarize specific transportation requirements for your PCB wastes.

- You do not need to manifest your PCB waste when you transport a piece of equipment taken out of service in your cooperative's truck back to your cooperative and put it in the storage for disposal area. However, you must mark your truck as described in Section 2.4.3.

- The manifest must include a description of the PCB waste, the weight (in kgs) of the PCB waste, and the date of removal from service of the PCB waste.

- The manifest must include your EPA PCB waste handling identification number (if you have one, or the number "40 CFR 761" if you do not have a number), the transporter's EPA PCB identification number, and the disposal facility's EPA PCB identification number.

Refer to Chapter 4 for details on characterizing and manifesting your PCB-wastes, and preparing them for transport.

2.4.9 How Can You Reduce the Risks Involved with PCB Transformers?

As discussed briefly in Section 2.5, and indicated throughout this chapter, there are numerous risks involved with using and maintaining PCB transformers and other PCB equipment, as well as in disposing of the PCBs and PCB items at your cooperative. This section presents a number of suggestions for reducing the risks, and thereby reducing the environmental liability to your cooperative of a spill or release of PCBs into the environment.

Begin an Inventory Program

There is no requirement to inventory the transformers you have in use. However, you can most effectively manage your PCBs if you know where they are and what their classification is. Earmark anything manufactured prior to 1979 or any unit that has been repaired or maintained by a suspect facility (some facilities were not careful about the type of dielectric fluid used to refill transformers) as suspect. Try to test any transformers in your system that you can not detemine the PCB content of (or have maintenance performed on them - they will be tested as part of maintenance, see Section 2.4.1), and keep all lab data with your records. Also keep records of all maintenance actions on each transformer.

Most cooperatives will have to perform such an inventory over a period of several years. You might establish a priority system of which transformers could cause you the most headaches, and test those first. For example, if a transformer leaked, which ones could leak into water, onto buildings or parking lots, etc.? Test those first. If you perform your own repair or maintenance, test each suspect transformer as it comes into your shop .

Never Let a Transformer Leave Your Control Without Knowing its PCB Concentration

Make sure your records on each transformer you own are up to date and include date of purchase, all available maintenance records, laboratory tests on the dielectric fluid, or any other information that has helped you determine the PCB concentration (see Section 2.4.1). If necessary, collect a sample of the dielectric fluid (see Section 2.4.1) and submit it for analysis to determine the concentration.

Dispose of Your PCB Transformers (500 ppm or greater)

There is no requirement to dispose of equipment which is still working. However, the most complete reduction of risk from use of a PCB transformer can only be achieved by properly disposing of the item (see Section 2.4.8). An added benefit is proper disposal of PCB Transformers eliminates the risk of clean-up costs. If the PCB Transformer were to rupture or spill, it would cost your cooperative a lot of money to clean-up. By paying the cost to dispose of the PCB transformer, you have a much higher likelihood of avoiding very expensive cleanup costs in the long run should the transformer rupture and spill PCBs into the environment.

Reclassify Your PCB Transformer (500 ppm or greater) or Your PCB-contaminated Transformer (50–499 ppm)

Details on procedures for reclassification are provided in Section 2.4.6.

Enclose Your PCB Transformer (500 ppm or greater)

If you construct an impervious berm which could hold 100 percent of any spilled material around your PCB transformer, it would contain spills. This could be a useful option for very large transformers that you cannot easily or economically reclassify or dispose. Construction of a berm would not prevent all problems, but it would help to contain them, which is important. The requirement to inspect each PCB transformer on a quarterly basis is

reduced to inspection on a yearly basis for transformers that have a berm which could contain 100 percent of any spilled dielectric fluid.

Inspect Your PCB Transformers (500 ppm or greater) and Your PCB-contaminated Transformers (50–499 ppm)

Details on inspection procedures and requirements are provided in Section 2.4.4. Routine inspections can identify potential problems before they occur, and allow the problem to be resolved without it becoming a major catastrophe.

Plan Ahead for Emergencies

Plan what you will do if there is a spill or fire related incident involving your equipment containing PCBs. There are OSHA requirements which require cooperatives to prepare written emergency plans and train employees to handle spills and other emergencies (these are discussed in Section 7).

2.5 SPILLS, LEAKS, AND FIRES

PCBs potentially can be released to the environment if spills or leaks occur, or if the PCB item catches fire and releases PCBs. This section provides general information on reporting, responding to and cleaning up spilled or leaked PCBs or fires involving PCBs. Chapter 7 provides detailed information on requirements for handling and cleaning up spills and leaks, and information on preventing such occurrences.

Call National Response Center after spill

If you have a spill of more than one pound of PCBs anywhere into the environment, or if your spill (regardless of amount) contaminates surface water, sewers, drinking water supplies, grazing lands, or vegetable gardens, you must immediately call the National Response Center at 1-800-424-8802 and your regional EPA office. If you have a spill from an untested oil-filled transformer, you must assume it contains 50 to 499 ppm. In this case, if you spill 270 gallons of oil or more you must report the spill. Most States also have reporting requirements which may differ from the federal reporting requirements. For cleanup of spills of PCBs which occurred prior to May 4, 1987, contact your local EPA Regional office for direction on cleanup.

2.5.1 Spill Cleanup Requirements

PCB spill cleanup policy

If any type of spill or leak of PCBs in concentrations greater than 50 ppm occurs, immediate action must be taken to protect human health and the

environment. The PCB Spill Cleanup Policy found at 40 CFR Part 76l, Subpart G tells you what you must do to properly handle PCB spills (50 ppm and above).

Low concentration spills (from a source containing less than 500 ppm PCBs) involving less than 1 pound of PCBs require a double-wash-rinse cleanup of all contaminated surfaces, and cleanup of all visible traces in soil within 48 hours. Records of your cleanup must be kept.

USEFUL TIP

The concentration of PCBs in contaminated soil or other media and cleanup material is measured by the PCB concentration in the material which spilled or leaked. For example, if you have a transformer with 345 ppm PCBs, the PCB concentration in the material the PCBs spilled or leaked into is 345 ppm. Dilution in the soil is not relevant, and all material must be cleaned up to the required cleanup level, and disposed of (along with the cleanup material) as if it contained 345 ppm.

High concentration spills (from a source containing 500 ppm PCBs or greater),or low concentration spills involving 1 pound or more by weight require cleanup to be initiated within 24 hours. You must clean up all visible traces of oil and decontaminate surfaces to specified levels depending on the location of the spill. You must verify your cleanup is complete by sampling (see Section 2.4.1 for information on developing a sampling plan). Records of cleanup and sampling activities must be kept. Cleanup must be completed promptly.

2.5.2 What Do I Do if I Have a Fire Involving PCBs?

Call National Response Center if fire involves a transformer.

A "fire related incident" is defined as any incident involving a PCB transformer which involves the generation of sufficient heat and/or pressure to result in the violent or nonviolent rupture of the PCB transformer and the release of PCBs. If one of your cooperative's PCB transformers is involved in a fire related incident, you must immediately report the fire to the National Response Center at 1-800-424-8802 and take measures to contain and control the possible release of PCBs into water. You must keep records of the incident.

Keep combustibles away from transformers

To eliminate fire hazards, combustible materials, including but not limited to, paints, solvents, plastics, paper, and sawn wood cannot be stored within 5 meters (about 16-17 feet) of a PCB transformer in use or stored for reuse. However, EPA has determined that you can store PCB transformers for reuse on wooden pallets because the pallet is deemed "in-use" as well as the transformer. EPA did not intend that equipment and materials in use in transformer locations such as wooden pallets and timbers used to support heavy transformers be considered stored

combustibles. They are considered similar to the equipment they support or to ease transport of the machinery.

2.6 RECORDKEEPING REQUIREMENTS

You must develop and maintain records that document that you are following all of the use and disposal requirements. The recordkeeping requirements are contained throughout the PCB rules, but many of them are found at 40 CFR Section 761.180(a). Table 2-4 also provides most record retention requirements. Cooperatives must keep the following records: EPA identification number, records of required inspections and maintenance history, notification to the fire department, spill and leak documents, commercial building notifications, manifests and certificates of disposal, and records for PCB containers in storage for disposal. Examples of notification and inspection records are provided in Section 2.7.6. If you want to be able to prove the PCB concentration in your equipment, you also must keep laboratory test results.

In addition, cooperatives which use or store at least one PCB transformer, 50 PCB large capacitors, or 99.4 lbs of PCBs in containers must keep the following records:

- ***Annual Records*** of the activities involving the cooperatives' PCBs, including those in use or in storage for reuse, and those in storage for disposal or which have been disposed of during the year. These records must include all manifests, certificates of disposal exception reports, and one-year exception reports.

- An ***Annual Document Log*** which includes specific and detailed information (dates, weights, etc.) on the PCBs used, stored and disposed of during the year. An example annual document log is provided in Section 2.7.4.

The records and logs must be maintained for at least 3 years <u>after</u> the facility no longer uses or stores PCB transformers, capacitors or containers in the above quantities. All records must be available for inspection by EPA upon request.

Document	Retention Period	Regulation
Annual Documents, Annual Document Logs, Annual Records (i.e., waste manifests and certificates of disposal signed by disposer)	3 years after facility ceases using or storing 99.4 lbs. PCBs, 1 or more PCB transformers, or 50 or more large PCB capacitors	761.180(a)
PCB transformer inspection and maintenance records	3 years after disposing of the transformer	791.30(a)(1)(xii) or (xiii)
Waste manifests for PCB waste by generator who is not subject to annual document requirements	3 years from the date the PCB waste was accepted by the initial transporter	761.209(a)[1]
Spill cleanup records - decontamination records (see Section 7)	5 years after completion of cleanup	761.125(b)(3) or (c)(4)
PCB Transformer Fire Department notification	None[2]	761.30(a)(1)(vi) & 761.30(a)(1)(xv)(D)
PCB Transformer Commercial Building notification		761.30(a)(1)(vii)
PCB storage facility inspection records		761.65(c)(5)
Retrofill Records		761.30(a)(2)(iv) & 761.30(a)(1)(iii)(C)(1)
Bulk storage batch records		761.65(c)(8)
PCB notification (EPA Form 7710-53)	While facility owns or operates a PCB storage facility subject to 71.65(b) or (c)(7)	761.205(a)(2)
Installation of PCB transformer in an emergency in or near commercial buildings - documentation supporting reason for installation	None[2]	761.30(a)(1)(iii)(B)(1)
PCB transformer involved in a fire - record of communication with National Response Center		761.30(a)(1)(xi)
SPCC plan for containers as specified in 761.65(c)(7)(I)	While container is storing PCBs >49 ppm.	761.65(c)(7)(ii)
Bulk storage batch records	While PCBs >49 ppm are stored in bulk storage	761.65(c)(8)

[1] Title 40 CFR 761.209(d) states: “The periods of record retention required by this section shall be extended automatically during the course of any outstanding enforcement action regarding the regulated activity”.

[2] There is no specified retention time for these documents, but U.S. EPA strongly suggests that these documents be retained for the same amount of time as the annual document logs in order to prove that these requirements have been met.

Table 2-4. Records Retention Periods for PCB Generators

Keep records longer than 3 years

Although there is no requirement to do so, cooperatives should keep these records beyond the three-year period to show compliance and limit liability in future years. This is particularly true of records which show that a cooperative is PCB free. If the laboratory tests are not kept, the cooperative will have no way to prove its equipment does not contain PCBs unless the nameplate specifically says it does not. In addition, documents may be useful to show you are a very limited contributor if your cooperative is pulled into a Superfund site.

2.7 RESOURCES

2.7.1 References

Guidelines for Polychlorinated Biphenyls. Lawrence Livermore National Laboratory, an LLNL Environmental Guidelines Document.

PCB Q & A Manual. Operations Branch, Chemical Management Division, EPA Office of Pollution Prevention and Toxics. 1994.

PCB Information Package. TSCA Assistance Service. January 1977.

PCBs *in Flourescent Light Fixtures – A Fact Sheet*. EPA Region 10, Air and Toxics Division. May 1993.

Light Brief. EPA Green Lights Program. EPA 430-F-92-009. August 1992.

Lighting Waste Disposal. EPA Green Lights Program. January 1994.

Fluorescent Lamp Disposal. EPA Green Lights Program. EPA 430-F-93-002. January 1993.

2.7.2 For Further Information

TSCA Hotline: (202) 554-1404

If you are not sure whether you own or use PCBs or PCB equipment or need to find out more about the Federal regulations, you can call this hotline. Your hotline call will be confidential. Hotline personnel will most likely be able to answer your question, but may refer you to your EPA Regional office contact for further information. (See section 1.4.)

National Response Center (NRC) Hotline: (800) 424-8802

If you have a spill of PCBs – see Section 2.5

You may also call your State rural electric cooperative association or your cooperative attorney. You should contact your State environmental agency (see Section 1.4)or your cooperative attorney regarding individual State requirements.

2.7.3 Definitions

For more detailed definitions, see the PCB rules at 40 CFR 761.3.

Askarel—A brand name of PCBs, also a generic name for a broad class of fire-resistant insulation fluids. Askarel is a term commonly used to describe PCB dielectric fluid.

Askarel Transformer—A common reference to a transformer that contains any of the brand name PCB fluids thus indicating a very high concentration of PCBs

Ballast (fluorescent light)—A device for accumulating and holding a charge of electricity and that includes a capacitor containing 0.1kg (0.2lb) or less of dielectric fluid.

Capacitor Types—The following assumptions may be used if the actual weight of the dielectric fluid is unknown. A capacitor whose total volume is less than 100 cubic inches may be considered to contain less than 3 lbs of dielectric fluid, and a capacitor whose total volume is more than 200 cubic inches must be considered to contain more than 3 lbs of dielectric fluid. A capacitor whose volume is between 100 and 200 cubic inches may be considered to contain less than 3 lbs of dielectric fluid if the total weight of the capacitor is less than 9 lbs.

Certificate of Disposal—A document that certifies disposal of specifically identified PCB waste and which must be provided to the generator within 30 days of completion of disposal. Such Certificates of Disposal must be retained by the generator for at least 3 years after the generator ceases using or storing PCBs.

Disposal—To intentionally or accidentally discard, throw away or otherwise complete or terminate the useful life of an object or substance. Includes actions relating to containing, transporting, destroying, degrading, decontaminating, or confining those substances, mixtures, or articles that are being disposed.

Large High-voltage Capacitor—A capacitor which contains 3 lbs. or more of dielectric fluid and which operates at 2,000 volts (a.c. or d.c.) or above.

Large Low-voltage Capacitor—A capacitor which contains 3 lbs. or more of dielectric fluid and which operates below 2,000 volts (a.c. or d.c.).

Leak or Leaking—Any instance in which a PCB article, PCB container, or PCB equipment has any PCB chemical substance or mixture on any portion of its external surface (whether or not the fluid came from inside that item).

Low Voltage—As applied to capacitors, an operating voltage level of less than 2,000 volts.

Manifest—The shipping document, EPA Form 8700-22, and any continuation sheet attached to EPA Form 8700-22, originated and signed by the generator of PCB waste in accordance with the instructions included with the form.

Mark—The descriptive name, cautions, instructions or other information applied to PCB mixtures, articles, chemical substances, containers, equipment, or other objects or activities described in accordance with the EPA guidelines.

Non-PCB Transformer—A transformer that contains less than 50 ppm PCBs.

PCB—An acronym for polychlorinated biphenyl.

PCB Annual Log—A written log of documents that includes a summary of the annual records and an inventory of PCB materials. The deadline for compiling the annual log is 6 months after the end of the calendar year. This log shall be retained for at least three years after PCBs are reduced below regulated quantities.

PCB Annual Records—Includes all documentation relative to the acquisition or disposal of PCBs over a 12-month period. This documentation includes purchase orders, manifests, certificates of disposal and inadvertent generation reports. Annual records must be maintained for the same period as the annual log.

PCB Article—Any manufactured item, other than a PCB container, whose surface(s) (inside or outside) has been in direct contact with a PCB

chemical substance or a PCB mixture and includes capacitors, transformers, electric motors, pumps, pipes, etc.

PCB Article Container—Any package, can, bottle, bag, barrel, drum, tank or other device used to contain a PCB article or PCB equipment, and whose surface(s) has not been in direct contact with PCB chemical substance or PCB mixture.

PCB-contaminated Transformer—A transformer that contains 50 ppm or greater but less than 500 ppm PCBs.

PCB Equipment—Any manufactured item, other than a PCB container or a PCB article container, which contains PCB articles or other PCB equipment. Included are street lights, microwave ovens, fluorescent lights, electronic equipment, motor controls, etc.

PCB Free—A term some manufacturers place on the nameplate of electrical equipment to indicate the equipment contains less than 2 ppm PCBs. Some manufacturers may mean the equipment contains less then 1 ppm or 0 ppm in some cases when they use this term.

PCB Item—Any PCB container, PCB article container, PCB article, or PCB equipment that deliberately or unintentionally consists of or has as a part of it any PCB or PCBs at a concentration of 500 ppm or greater.

PCB Mixture—Any mixture which contains 500 ppm or greater of a PCB chemical substance, and any mixture which contains less than that amount because of any dilution of such a mixture. Includes (but not limited to) dielectric fluid and contaminated solvents, oils, waste oils, other chemicals, rags, soil, paints, debris, sludge, and materials contaminated as a result of a spill such as clothing, gravel, dirt, etc.

PCB Transformer—A transformer that contains 500 ppm or greater PCBs.

PCB Waste—Mineral oil dielectric fluid from PCB-contaminated electrical equipment, liquids other than mineral oil dielectric fluid, any non-liquid PCBs at concentrations of 50 ppm or greater.

Posing an Exposure Risk to Food or Feed—Being in any location where human food or animal feed products could be exposed to PCBs released from PCB equipment.

ppm—Part(s) per million

Retrofill—To remove PCB or PCB-contaminated dielectric fluid and to replace it with dielectric fluid so as to lower the PCB content of the electrical equipment for purposes of reclassification.

Small Capacitor—A capacitor which contains less than 3 lbs of dielectric fluid.

Spill—Intentional or unintentional spills, leaks or other uncontrolled discharges of PCBs where the release results in any quantity of PCBs running off or about to run off the external surface of the equipment or other PCB source, as well as the contamination resulting from those releases.

Transformer Classifications—Please note than any transformer that has been retrofilled and converted from a PCB Transformer, PCB-contaminated transformer, or non-PCB Transformer cannot be classified as such until proper reclassification has occurred (see information on reclassification in Section 2.4.6).

2.7.4 Annual Document Log

The written annual document log to cover the previous calendar year (January through December) must be prepared for each facility by July 1 of each year. The annual document log must be available for inspection at your facility by authorized EPA representatives during normal business hours. The owner or operator of the facility must know the location of the records.

The regulations require that the annual document log be kept at the facility for at least 3 years after the facility ceases using or storing PCBs and PCB items. In practice, you need to keep the document log indefinitely to demonstrate your compliance with the regulations. Questions may arise concerning your procedures several years later and the document log will be needed to demonstrate compliance and limit your liability.

Preparing Your Annual Document Log

An example of an annual document log (multiple forms) is provided at the end of this section. Use this section with the forms to write your log. The written annual document log must include the name, address and EPA identification number of your cooperative, and the calendar year covered. The log also must include the following information for each PCB transformer, large (high or low voltage) PCB capacitor, other PCB articles

(other than transformers and large capacitors), containers of PCBs, or PCB articles in containers at or generated at your cooperative:

- Which are in service (or stored for reuse) at the end of the calendar year
- Which have been removed from service and placed into storage for disposal (note: storage for disposal includes items or containers en route to be disposed)
- Which have been disposed of.

Each item or container owned or generated by your facility must be noted on the forms, with as much information requested on the forms as you have available. Information such as the manufacturer or dielectric fluid trade name that is unknown should be noted as such, and explained to the best of your ability.

2.7.5 PCB Disposal and Recycling Information

The following companies are commercially permitted to dispose of PCBs. Those marked with an asterisk(*) are permitted to operate in all ten EPA Regions.

Company	*Address*	*Phone No.*
Incinerators		
Aptus, Inc.	P.O. Box 1328 Coffeyville, KS 67337	(312) 251-2680
	P.O. Box 27488 Salt Lake City, UT	(801) 521-9009
	1160 N. Aptus Road Aragonite, UT	
Chemical Waste Management	P.O. Box 2563 Port Arthur, TX 77643	(409) 736-2821
Rollins	P.O. Box 609 Deer Park, TX 77536	(713) 930-2300
WESTON	One Western Way West Chester, PA 19380	(215) 692-3030*
Alternative Thermal Technologies		

Company	*Address*	*Phone No.*
General Electric	100 Woodlawn Avenue Pittsfield, MA 01201	(413) 494-2700
Chemical Dechlorination		
Chemical Waste Management	1550 Balmer Road Model City, NY 14107	(716) 754-8231
Exceltech, Inc. (ENSCO Subsidiary)	41638 Christy Street Fremont, CA 94538	(415) 659-0404
Aptus, Inc.	P.O. Box 1328 Coffeyville, KS 67337	(316) 251-6380
PPM, Inc. (USPCI Subsidiary)	1875 Forge Street Tucker, GA 30084	(404) 934-0902*
ENSR Operations (formerly Sunohio)	1700 Gateway Bldv. S.E. Canton, OH 44707	(216) 452-0837*
Transformer Consultants, Div. of S.D. Myers, Inc.	180 South Avenue Tallmage, OH 44278	(216) 452-0837*
Trinity Chemical Co., Inc.	6405 Metcalf, Cloverleaf 3, Suite 313 Shawnee Mission, KS 66202	(913) 831-2290
CECOS International Process Center	4879 Spring Grove Avenue Cincinnati, OH 45232	(513) 681-5738
Aptus Inc.	P.O. Box 1328 Coffeyville, KS 67337	(316) 251-6380
Unison Transformer Services, Inc.	5801 Riverport Road Henderson, KY 43420	(502) 827-0541
Quadex Environmental Company	1940 N.W. 67th Place Gainesville, FL 32606	(904) 373-6066*
General Electric	One River Road Schenectady, NY 12345	(518)385-2426
S.D. Myers, Inc.	180 South Avenue Tallmadge, OH 44278	(800) 444-9580
PCB Transformer Decommissioning (Disassembly/Smelting)		

Company	*Address*	*Phone No.*
Aptus, Inc.	P.O. Box 1328 Coffeyville, KS 67337	(316) 251-6380
Transformer Consultants, Div. of S.D. Myers, Inc.	180 South Avenue Tallmadge, OH 44278	(800) 444-9580
Unison	1302 W. 38th Street Ashtabula, OH 44004	(216) 992-8665
	3126 Brinkerhoff Road Kansas City, KS 66115	(913) 321-3155
Chemical Waste Landfills		
Chemical Waste Management Alabama, Inc.	P.O. Box 55 Emelle, AL 35459	(205) 652-9721
	P.O. Box 471 Kettleman City, CA 93239	
Chem-Security Systems, Inc.	Star Route, Box 9 Arlington, OR 98712	(503) 454-2643
Envirosafe Services, Inc. of Idaho	P.O. Box 16217 Boise, ID 83715-6217	(800) 274-1516
CWM Chemical Services Control, Inc.	1550 Balmer Road Model City, NY 14107	(716) 754-8231
U.S. Ecology, Inc.	P.O. Box 578 Beatty, NV 89003	(702) 553-2203
U.S. Pollution Control, Inc.	Grayback Mountain 8960 N Highway 40 Lake Point, UT 84074	(801) 595-3900
Biological		
Detox Industries, Inc.	12919 Dairy Ashford Sugar Land, TX 77478	(713) 240-0892

Company	*Address*	*Phone No.*
Ballast Recycling Services		
Eastern Environmental Technologies	Norwalk, CT	(203) 856-2014
Ensquare	Newton Upper Falls, MA	(617) 969-9238
Environmental Energy Group	Denton, TX	(817) 383-3632
FulCircle Ballast Recyclers	Cambridge, MA	(617) 876-2229
	Bronx, NY	(212) 328-4667
Salesco U.S.A.	Honolulu, HI	(800) 368-9095
Transformer Service, Inc.	Concord, NH 03302	(603) 224-4006

This is not a complete list of companies who provide recycling and disposal services.

2.7.6 Example Inspection And Notification Record Reports

These are included at the end of the section, following the annual report example.

PCB ANNUAL DOCUMENT LOG
FOR CALENDAR YEAR 19_____

(For use by user/storer other than commercial or disposer.)

Name and Address of user/storer Facility:

_____

_____

_____

_____

EPA ID No. _____
(12 digit number - use "40 CFR Part 761" if exempt, otherwise number is obtained from EPA.)

Prepared by: _____
(Signature)

Title:_____

Date: _____

I. PCB TRANSFORMERS

A. In Service at End of Calendar Year (includes in storage for future use):

Serial Number	Manufacturer	Physical Location	Dielectric Tradename	PPM PCB	Date Place in Service	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in transformers in service: _____

b. Total number of PCB transformers in service: _____

B. Removed from Service and Placed into Storage for Disposal:

Serial Number	Manufacturer	Dielectric Tradename	PPM PCB	Date Removed from Service	Date Placed in storage	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in transformers removed from service: _____

b. Total number of PCB transformers removed from service: _____

c. Name and address of initial storage facility: _____

_____

C. Disposed of:

Serial Number	Manufacturer	Date Removed from Service	PPM PCB	Kg. Wt. of PCB	Date Shipped	Manifest Number	Confirmed * Waste Rec'd.	Kg. Wt. of PCBs

***When PCB waste is transported by an independent transporter.**

a. Total Kg. Wt. of PCBs in transformers shipped for disposal: _____

b. Total number of transformers shipped for disposal: _____

c. Total number of transformers actually disposed: _____

d. Name and address of disposal facility: _____

_____

II. LARGE, HIGH OR LOW VOLTAGE PCB CAPACITATORS (3 lbs. Or more of dielectric fluid).

A. In Service at End of Calendar Year (includes in storage for future use):

Serial Number	Voltage	Manufacturer	Physical Location	Dielectric Tradename	Date Placed in Service	Volume	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in capacitators in service: _____
b. Total number of PCB capacitators in service: _____

B. Removed from Service and Placed into Storage for Disposal:

Serial Number	Voltage	Manufacturer	Dielectric Tradename	Date Removed from Service	Date Placed in storage	Volume	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in capacitators removed from service: _____
b. Total number of PCB capacitators removed from service: _____
c. Name and address of initial storage facility: _____
_____

C. Disposed of:

Serial Number	Volume	Manufacturer	Date Removed from Service	Kg. Wt. of PCBs	Date Shipped	Manifest Number	Confirmed* Waste Rec'd.	Date of Disposal

***When PCB waste is transported by an independent transporter.**

a. Total Kg. Wt. of PCBs in capacitators shipped for disposal: _____
b. Total number of capacitators shipped for disposal: _____
c. Total number of capacitators actually disposed: _____
d. Name and address of disposal facility: _____
_____

III. PCB ARTICLES (other than transformers and large capacitators). Use only one page for each specific type of PCB Article (i.e., regulators, circuit breakers, pipes, etc.). Add pages as needed, giving totals by specific type of PCB Article.

A. In Service at End of Calendar Year (includes in storage for future use):

Article Type	Serial Number	Manufacturer	Physical Location	Dielectric Tradename	PPM PCB	Date Place in Service	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in Articles in service: _____
b. Total number of PCB Articles in service: _____

B. Removed from Service and Placed into Storage for Disposal:

Article Type	Serial Number	Manufacturer	Dielectric Tradename	PPM PCB	Date Removed from Service	Date Place in storage	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in Articles removed from service: _____
b. Total number of PCB Articles removed from service: _____
c. Name and address of initial storage facility: _____
_____

C. Disposed of:

Article Type	Serial Number	Manufacturer	Date Removed from Service	PPM PCB	Kg. Wt. of PCBs	Date Shipped	Confirmed* Waste Rec'd.	Date of Disposal

***When PCB waste is transported by an independent transporter.**

a. Total Kg. Wt. of PCBs in Articles shipped for disposal: _____
b. Total number of Articles shipped for disposal: _____
c. Total number of Articles actually disposed: _____
d. Name and address of disposal facility: _____
_____

IV. PCBs IN CONTAINERS (includes bulk-storage and tanker-trucks).

A. In Service at End of Calendar Year (includes in storage for future use):

Container Number	Container Type	Description of Container Contents	Physical Location	Date Place in Service	Volume	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in containers in service: _____
b. Total number of PCB containers in service: _____

B. Removed from Service and Placed into Storage for Disposal:

Container Number	Container Type	Description of Container Contents	Date Removed from Service	Date Place in Storage	Volume	Kg. Wt. of PCBs

a. Total kilogram weight of PCBs in containers removed from service: _____
b. Total number of containers removed from service: _____
c. Name and address of initial storage facility: _____
_____

C. Disposed of:

Container Number	Date First Item Removed from Service	Description of Container Contents	Kg. Wt. of PCBs	Volume	Date Shipped	Manifest Number	Confirmed* Waste Rec'd.	Date of Disposa

***When PCB waste is transported by an independent transporter.**

a. Total Kg. Wt. of PCBs in containers shipped for disposal: _____
b. Total number of containers shipped for disposal: _____
c. Total number of containers actually disposed: _____
d. Name and address of disposal facility: _____
_____

V. PCB ARTICLES IN CONTAINERS

A. In Service at End of Calendar Year (includes in storage for future use):

Container Number	Description of Container Contents	Physical Location	Date Place in Service	Volume	Kg. Wt. of PCBs	Kg. Wt. Of Cont.

a. Total kilogram weight of PCB Articles in containers in service: _____
b. Total number of PCB Article containers in service: _____

B. Removed from Service and Placed into Storage for Disposal:

Container Number	Description of Container Contents	Date Removed from Service	Date Place in Storage	Volume	Kg. Wt. of Arts.	Kg. Wt. of Cont.

a. Total kilogram weight of PCB Articles in containers removed from service: _____
b. Total number of PCB Article containers removed from service: _____
c. Name and address of initial storage facility: _____
_____

C. Disposed of:

Container Number	Description of Container Contents	Date first Item Removed from Service	Kg. Wt. of Arts.	Volume	Date Shipped	Manifest Number	Confirmed * Waste Rec'd.	Date of Disposa

***When PCB waste is transported by an independent transporter.**

a. Total Kg. Wt. of PCB Articless in containers shipped for disposal: _____
b. Total number of PCB Article containers shipped for disposal: _____
c. Total number of PCB Article containers actually disposed: _____
d. Name and address of disposal facility: _____
_____

Telephone Log for Contacting Disposers and Transporters

(should be included in Annual Document Log)

(Fill out one for each telephone call and attach all logs to copy of manifest.)

Year:

Telephone Calls Made to Independent Transporters, or Designated Commercial Storers or Disposers

---

Date: Time:

Person Called, Company Name, and Telephone Number:

Person Who Made Call:

Waste Called About (describe, including manifest #):

Summary of Conversation:

What Happened to Waste?

PCB Transformer _____ Inspection Record
serial number

(keep separate form for each transformer)

Date	Manufacturer	Physical Location	PCB Concentration or Tradename	Leaks		Location of Leak	Inspected By
				Yes	No		
9/7/94	Westinghouse	Plant B	Inerteen		✓		J. Adams

1. *a. If yes, describe location: _____

   b. Date leak discovered: _____

   c. Estimate of the amount of fluid released from leak: _____

   d. Date of any cleanup, containment, or repair or replacement: _____

   e. Description of any cleanup, containment, or repair performed: _____
   _____
   _____
   _____

   f. Results of any containment: _____
   _____
   _____
   (Daily inspection required for uncorrected active leaks. Cleanup must be initiated as soon as possible, but in no case less than 48 hours after discovery).

2. Comments: _____
   _____
   _____
   A leak is a PCB spill which results in ANY quantity of PCBs running off or about to run off the external surface of the transformer. For purposes of the definition, a PCB spill includes a weep, seep, or drip.

3. Signature of person performing inspection: _____

COMMERCIAL BUILDING OWNER
NOTIFICATION OF PCB TRANSFORMERS

(Commercial building owners must be notified of PCB transformers located inside their building and/or any PCB transformers located within 30 meters of their building.)

1. Name of Commercial Building: _____
2. Address of Commercial Building: _____
3. Building Owner of Record: _____ Tel. No.: _____
4. Owner of PCB Transformer: _____ Tel. No.: _____
5. Address of PCB Transformer Owner: _____
   _____

6. **PCB Transformer Inventory**

Serial Number	PPM PCB	Kg. Wt.	Street Address of Transformer	Specific Location at Address	Principal Constituent	Type of Installation

7. _____
(Signature) (Date)

FIRE DEPARTMENT NOTIFICATION OF PCB TRANSFORMERS

1. Name of Facility: _____
2. Facility Street Address: _____
   _____
3. Name of Facility Representative to Contact in Case of Emergency: _____
   _____
4. 24 hr. Telephone Number of Facility Representative: _____
5. Name of Person Contacted at Fire Department: _____
6. Address of Fire Department: _____
   _____
7. Fire Department Telephone Number: _____

8. **PCB Transformer Inventory**

Serial Number	Dielectric Tradename	PPM PCB	Kg. Wt.	Street Address of Site	Location of Transformer at Site	Principal Constituent

7. _____ _____
(Signature) (Date)

PCB Storage Area Inspection Record

Type of Area

☐ Permanent

☐ Temporary

☐ Pallet

For _____

(Name and Location of Storage Area)

Date of Inspection	Condition of Storage Area (Any cracks?)	Types of Equipment in Storage	Any Leaks? (Yes/No) if yes, do corrective action record	Describe Leaks	Corrective Action Taken (leaks cleaned up, item repaired, etc.)	All Equipment and Containers Dated? (Yes/No)	Inspector Signature

PCB Storage Area Inspection Record

For _____
(Name and Location of Storage Area)

Date of Inspection	Condition of Storage Area (Any cracks?)	Types of Equipment in Storage	Any Leaks? (Yes/No) if yes, do corrective action record	Describe Leaks	Corrective Action Taken (leaks cleaned up, item repaired, etc.)	All Equipment and Containers Dated? (Yes/No)	Inspector Signature

Inspection Record for Miscellaneous PCB Liquids and Articles in Use or Stored for Reuse

Date	Item Inspected	Location of Item	Any Leaks? (Yes/No)	Last Date of Service	Inspector

Leaking Item Corrective Action Record

(to be completed every day until item is repaired or leak resolved)

Date of Inspection	Leaking Item	Exact Location of Leak on Item	Estimate of Amount or Fluid Released to Date	Corrective Action(s) Taken (continuing to contain active leak, cleanup spill, item repaired, etc.	Date of Repair/Replacement	Date Cleanup Complete